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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/589,675	06/07/2000	Steven C. Murray	PA1513US	8651

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EXAMINER	
FARAH, AHMED M	
ART UNIT	PAPER NUMBER
3739	

DATE MAILED: 06/20/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	Applicant(s)
09/589,675	Murray et al.
Examiner	**Art Unit**
A. Farah	3739

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *three* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-34* is/are pending in the application.

4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16, 22-25, and 27-34* is/are rejected.

7)☒ Claim(s) *17-21 and 26* is/are objected to.

8)☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some* c)☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a)☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
4) ☐ Interview Summary (PTO-413) Paper No(s). _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 9, 10, 14, 22, 24, 25, 27-30, 33 and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Eckhouse (U.S. Pat. No. 5,720,772).

Eckhouse discloses a therapeutic treatment device and method for treating skin conditions, the device comprising:

1) a pulsed light source (flash lamp **14**),

2) a glass tube (**15**) that is located coaxially with flashlamp (**14**), said glass tube (**15**), which has a fluorescent material deposited on it, receives incident radiation from the pulsed light source and responsively provides emitted radiation having substantially different spectral characteristics with respect to the incident radiation, and

3) a redirector (elliptical reflector **16**) for redirecting at least a portion of the emitted radiation toward a tissue target.

In reference to claims 14, 25 and 34, the 'redirector' (elliptical reflector **16**) directs and redirects the fluorescent light from the tube and also the diffuse light reflected from the surface of the filters toward the tissue target (Col. 5, lines 39-44).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 4-8 and 11 are again rejected under 35 U.S.C. 103(a) as being unpatentable over Eckhouse in view of Sinofsky (U.S. Pat. No. 6,270,492 B1) and in view of Byren et al. (U.S. Pat. No. 4,853,528).

Although Eckhouse, described above, discloses a fluorescent material deposited on the glass tube, he does not particularly teach the use of liquid dyes or a solid medium consisting of polymer as the active medium for fluorescing the incident radiation.

Sinofsky teaches a photo-therapeutic apparatus comprising a light-diffusing fiber tip assembly (**10**) having a radiation scattering particles (**24**) selected from a group consisting of a polymer, glass or suitable liquids (see Col. **9**, lines **27-33**). However, although Sinofsky teaches the use liquids fluorescent medium, he does not particularly teach the use of liquid dyes.

As known in the art of non-linear optics, Byren teaches the use of nonlinear optical mediums (i.e., solid, liquid, or gas), which can be used for shifting light frequency. In one embodiment, he uses fluorescent dye as a frequency shifter.

Thus, it would have been obvious to one skilled in the art at the time of the applicant's invention to modify Eckhouse in view of Sinofsky and in view of Byren to have an alternative

frequency shifting means (such as a polymer or liquid dyes) on Eckhouse's glass tube in order to select a wavelengths suitable for a particular/desired treatment.

5. Claims 12, 13, and 23 are again rejected under 35 U.S.C. 103(a) as being unpatentable over Eckhouse in view of Talpalriu et al. (U.S. Pat. No. 6,171,302 B1).

Eckhouse, described above, does not teach the use of optical fiber to deliver pump radiation to the fluorescent element.

Talpalriu teaches an alternative treatment apparatus and method for delivering therapeutic light to patient's skin. In reference to claim 12, Fig. 5 of Talpalriu shows optical fiber (**72**), which delivers light energy from radiation source to a handpiece (**64**) that is used to apply therapeutic energy onto a target tissue. In reference to claim 13, Fig. 2 of Talpalriu teaches that the incident radiation is delivered to the handpiece through an articulated arm.

Thus, it would have been obvious to one skilled in the art at the time of the applicant's invention to modify Eckhouse with Talpalriu and use optical fiber or an articulated arm as an alternative light guides in order to deliver energy from external light source to handpiece for irradiating tissue.

6. Claims 15, 16, 31, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eckhouse in view of Braun et al. (U.S. Pat. No. 5,425,754)..

Eckhouse, described above, does not teach a transparent window having a proximal face positioned adjacent to the fluorescent element and a distal for contacting the target, or a means for cooling the window.

However, Braun et al. disclose an alternative method and device for irradiating tissues, the device comprising: a radiation source (lamp **8**) for emitting a treatment light; a reflector (**7**), which directs the incident light toward the treatment site; a cuvette (**4**) consisting of casing (**9**) and two transparent "windows" (**10**), which are normal to the optical path of the incident radiation; and water (**11**) deposed inside the cuvette for cooling the target tissues. Thus it would have been obvious to one skilled in the art at the time of the applicant's invention to modify Eckhouse with Braun et al. and have a tissue cooling window that is disposed between the irradiation source and the target site in order to cool the tissues, and to control and keep the temperature of the tissues at a desired level.

Claim Objections

7. Claims 17-21 and 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. Claim 33 is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 1. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Response to Arguments

9. Applicant's arguments filed on March 28, 2002 have been fully considered. In reference to claims 1, 22, and 33, the applicant argues that:

a) Eckhouse ('772) discloses optical filters to control the spectrum and intensity of the light, but

b) fails to teach or suggest a *fluorescent element* positioned to receive and "responsively generate emitted radiation."

In response to the first argument, the Examiner agrees with the applicant and therefore withdraws the previous rejection in which the filters were treated to emit fluorescent light. However, in response to the second argument, Eckhouse discloses a glass tube, which receives pump radiation and responsively generates emitted radiation (see Col. 5, lines 56-59 of Eckhouse).

In regard to Braun et al. ('754), the examiner agrees with the applicant's arguments. Therefore, the anticipation rejection by Braun et al. under 35 U.S.C 102(b) has been removed.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See the following references:

1. Berry	U.S. Pat. No. 6,254,594 B1
2. Neev	U.S. Pat. No. 6,156,030
3. Muller	U.S. Pat. No. 5,830,208

Any inquiry concerning this communication or earlier communications from the examiner should be directed to A. Farah whose telephone number is (703) 305-5787. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Linda Dvorak, can be reached on (703) 308-0994. The fax number for the Examiner is (703)746-3368.

LINDA C. M. DVORAK
SUPERVISORY PATENT EXAMINER
GROUP 3700

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06/13/02